FEMA

2nd Avenue SEA Street
Seattle, Washington

State-wide,
Washington

Seattle, WA - The 2nd Avenue Street Edge Alternative (SEA) Street project was a pilot project undertaken by Seattle Public Utilities to redesign an entire 660-foot block with a number of Low Impact Development (LID) techniques. The goals were to reduce stormwater runoff and to provide a more “livable” community.

Throughout the design and construction process, Seattle Public Utilities worked collaboratively with street residents to develop the final street design. The design reduced imperviousness, included retrofits of bioswales (landscape elements intended to remove silt and pollution from surface runoff water) to treat and manage stormwater, and added 100 evergreen trees and 1,100 shrubs.

Conventional curbs and gutters were replaced with bioswales in the rights-of-way on both sides of the street, and the street width was reduced from 25 feet to 14 feet. The final constructed design reduced imperviousness, or resistance, by more than 18 percent.

The costs for the LID retrofit were compared with the estimated costs of a conventional street retrofit. Managing stormwater with LID techniques resulted in a cost savings of 29 percent. Also, the reduction in street width and sidewalks reduced paving costs by 49 percent.

For this site, the environmental performance has been even more significant than the cost savings. Hydrologic monitoring of the project indicates a 99 percent reduction in total potential surface runoff, and runoff has not been recorded at the site since December 2002, a period that included the highest-ever 24-hour recorded rainfall at Seattle-Tacoma Airport. The site is retaining more than the original design estimate of .75 inch of rain.

Quick Facts

Sector:
Public

Cost:
Amount Not Available

Primary Activity/Project:
Flood Control

Primary Funding:
Other Federal Agencies (OFA)